

# VALOX<sup>TM</sup> RESIN 508

REGION EUROPE

## DESCRIPTION

30% GR PBT+PC. Excellent mechanical and thermal performance. Non-flame retardant. Reduced warpage characteristics. Applications same as VALOX 420.

## TYPICAL PROPERTY VALUES

Revision 20190214

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Taber Abrasion, CS-17, 1 kg	50	mg/1000cy	SABIC method
Tensile Stress, break, 5 mm/min	115	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	9000	MPa	ISO 527
Flexural Stress, break, 2 mm/min	170	MPa	ISO 178
Flexural Modulus, 2 mm/min	8000	MPa	ISO 178
Hardness, H358/30	122	MPa	ISO 2039-1
Hardness, Rockwell R	119	-	ISO 2039-2
<b>IMPACT</b>			
Izod Impact, unnotched 80*10*4 +23°C	45	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	40	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	8	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	7	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	7	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	6	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	45	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	45	kJ/m <sup>2</sup>	ISO 179/1eU
<b>THERMAL</b>			
CTE, 23°C to 80°C, flow	2.5E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	1.E-04	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	1.05E-04	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	217	°C	ISO 306
Vicat Softening Temp, Rate B/50	170	°C	ISO 306
Vicat Softening Temp, Rate B/120	175	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	206	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	160	°C	ISO 75/Ae
Relative Temp Index, Elec	125	°C	UL 746B
Relative Temp Index, Mech w/impact	110	°C	UL 746B
Relative Temp Index, Mech w/o impact	125	°C	UL 746B
<b>PHYSICAL</b>			
Mold Shrinkage on Tensile Bar, flow	0.4 – 0.6	%	SABIC method
Mold Shrinkage on Tensile Bar, xflow	0.5 – 0.9	%	SABIC method
Density	1.5	g/cm <sup>3</sup>	ISO 1183

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Water Absorption, (23°C/sat)	0.09	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
Melt Volume Rate, MVR at 250°C/2.16 kg	8	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL</b>			
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, shorttime, 1.0mm	24	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 0.8 mm	30	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	23	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	16	kV/mm	IEC 60243-1
Relative Permittivity, 100 Hz	3.6	-	IEC 60250
Relative Permittivity, 1 MHz	3.2	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.001	-	IEC 60250
Dissipation Factor, 100 Hz	0.0014	-	IEC 60250
Dissipation Factor, 1 MHz	0.013	-	IEC 60250
Comparative Tracking Index	250	V	IEC 60112
Comparative Tracking Index, M	150	V	IEC 60112
Relative Permittivity, 50/60 Hz	3.3	-	IEC 60250
<b>FLAME CHARACTERISTICS</b>			
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
UL Recognized, 94HB Flame Class Rating 2nd value	3	mm	UL 94
Glow Wire Flammability Index 750°C, passes at	1	mm	IEC 60695-2-12
Oxygen Index (LOI)	21	%	ISO 4589
<b>INJECTION MOLDING</b>			
Drying Temperature	110 – 120	°C	
Drying Time	2 – 4	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	250 – 270	°C	
Nozzle Temperature	240 – 260	°C	
Front - Zone 3 Temperature	245 – 265	°C	
Middle - Zone 2 Temperature	240 – 255	°C	
Rear - Zone 1 Temperature	230 – 245	°C	
Hopper Temperature	40 – 60	°C	
Mold Temperature	40 – 100	°C	

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